



Movie Watching and Sleep Habits



One hundred middle-school students took a survey on a Monday and wrote down the average number of hours of sleep they got the previous week and the number of movies they watched the previous week. The dataset is provided on the next page.

Key questions: Does this data tell us anything about this population of students and their movie-watching and sleep habits? Given your answer, what do you think can be said about the entire middle school student population and their habits?

We're going to investigate this question and see if we can come to any conclusions.

1. Using a random-number generator, select 30 *different* students from the data set using their assigned numbers in the table and record your results on your paper.
2. Enter your data into Tinkerplots and obtain a graphical representation (of your group's choice) of the sleep habit data in your sample that you can compare with the other members in your group.
3. What similarities and differences do you observe between your group members' samples? What conclusions can you make about the sleep habits of these students based on these observations?
4. Identify at least one data point that seems uncharacteristic of the rest of the data. Describe what that data represents in context and why you believe that data can be expected or not.
5. Obtain a different graphical display of your data than you used in #2-4 above, and repeat steps 2 and 3. What conclusions can you make about the population of students in this data set based on this visual representation?
6. Repeat steps #2-5 for the data on number of movies.
7. Are there any other questions you can answer or explore with the data provided? For example, is there a relationship you can determine between students' movie watching habits and whether they influence sleep habits? Does gender play a role?

Student Data

Student Number	Gender	Sleep (hours)	Number of Movies
1	B	11.5	14
2	B	2.0	8
3	G	7.7	3
4	B	9.3	1
5	B	7.1	16
6	B	7.5	1
7	B	8.0	4
8	G	7.8	1
9	G	8.0	13
10	G	8.0	15
11	B	9.0	1
12	B	9.2	10
13	B	8.5	5
14	G	6.0	15
15	B	6.5	10
16	B	8.3	2
17	G	7.4	2
18	B	11.2	3
19	G	7.3	1
20	B	8.0	0
21	G	7.8	1
22	G	7.8	1
23	B	9.2	2
24	G	7.5	0
25	B	8.8	1
26	G	8.5	0
27	G	9.0	0
28	G	8.5	0
29	B	8.2	2
30	G	7.8	2
31	G	8.0	2
32	G	7.3	8
33	B	6.0	5
34	G	7.5	5
35	B	6.5	5

Student Number	Gender	Sleep (hours)	Number of Movies
51	B	5.0	4
52	B	6.5	5
53	G	8.5	2
54	B	9.1	15
55	G	7.5	2
56	G	8.5	1
57	G	8.0	2
58	G	7.0	7
59	G	8.4	10
60	G	9.5	1
61	G	7.3	5
62	G	7.3	4
63	B	8.5	3
64	B	9.0	3
65	B	9.0	4
66	G	7.3	5
67	G	5.7	0
68	G	5.5	0
69	B	10.5	7
70	G	7.5	1
71	B	7.8	0
72	G	7.3	1
73	B	9.3	2
74	B	9.0	1
75	B	8.7	1
76	B	8.5	3
77	G	9.0	1
78	B	8.0	1
79	B	8.0	4
80	B	6.5	0
81	B	8.0	0
82	G	9.0	8
83	G	8.0	0
84	B	7.0	0
85	B	9.0	6

36	B	9.3	1
37	G	8.2	3
38	B	7.3	3
39	G	7.4	6
40	G	8.5	7
41	B	5.5	17
42	B	6.5	3
43	B	7.0	5
44	G	8.5	2
45	G	9.3	4
46	G	8.0	15
47	B	8.5	10
48	G	6.2	11
49	G	11.8	10
50	G	9.0	4

86	B	7.3	0
87	G	9.0	3
88	G	7.5	5
89	B	8.0	0
90	G	7.5	6
91	B	8.0	4
92	B	9.0	4
93	B	7.0	0
94	B	8.0	3
95	B	8.3	3
96	B	8.3	14
97	G	7.8	5
98	G	8.5	1
99	G	8.3	3
100	B	7.5	2